Page 13, line 6, after "opening" please add – 48a --;

Page 13, line 8, please change "FIG.3b" to -- FIG.3a --;

Page 13, line 25, please change "50" to – 47 --;

Page 13, lines 26 and 28, all occurrences, please change "48" to – 49 --;

Page 13, line 29, please change "48" to – 48a –

Page 21, line 9, please change "extend of a subsequent" to -- extend a subsequent --;

Page 21, line 31, please change "combinations, values" to -- combinations of values --;

Page 26, line 8, please change "condition obtained" to -- condition is obtained --;

Page 28, line 25, after "direction keys" please add – 71 --;

Page 31, line 15, please change "FIG. 4b" to – FIG. 5b --;

Page 31, line 18, after "function keys" please add -- generally indicated at 89 --;

Page 31, line 19, please change "FIG. 4a" to – FIG. 5a --;

Page 37, line 21, please change "120" to -- 121 --;

Page 37, line 24, please change "121" to -- 122 --;

Page 54, line 32, please change "initialization prior to" to -- initialization and prior to --;

Page 66, line 27, please change "122" to -- 121 --;

Page 66, line 34, please change "132" to -- 133 --;

Page 74, line 11, please change "proved" to -- provided --;

Page 74, line 26, please change "horizon and with north" to -- horizon and north --.

IN THE CLAIMS

Please amend claims 6, 7, 8, 10, 11, 14, 20, 21 and 22 as follows:

6. (Amended) An automated telescope system of the type including a telescope mounted for rotation about two substantially orthogonal axes, the automated telescope system comprising:

first and second motor [assemblies] portions, each coupled to rotate the telescope about a respective one of the axes, each motor [assembly] portion including:

a motor having a rotatable shaft;

an optical encoder coupled to the motor shaft [for providing], the encoder defining motor movement feedback [information] signals; and

[a] an intelligent motor control processor for commanding motor movement and evaluating optical encoder feedback [information] signals; and

a command unit connected to each motor [assembly] portion over a respective serial communication bus, the command unit receiving a desired telescope movement [commands] input from a user and developing appropriate control signals for communication to the intelligent motor control processor, wherein the intelligent motor control processor independently develops motor movement commands in operative response to control signals received from the command unit.

7. (Amended) The automated telescope system according to claim 6, the command unit further comprising:

a housing configured to be comfortably hand held;

a keypad, disposed on the housing for manipulation by a user to define a desired telescope movement [commands] input; and

a microcontroller, disposed within the housing, the microcontroller translating user manipulation of the keypad into control signals, the control signals directed to each motor [assembly] portion over the serial communication bus.

8. (Amended) The automated telescope system according to claim 7, the command unit further comprising:

a memory; and

a microprocessor, wherein the memory is adapted to host application software program code, executable by the microprocessor, the microprocessor performing high level application software execution tasks and numerical processing in order to define commands to the microcontroller, the microcontroller translating said commands into control signals for each motor [assembly] portion.

10. (Amended) The automated telescope system according to claim 9, a user identifying a geographical location indicia from the second database, proximate to the user's actual location, wherein the command unit includes program means for translating earth-based coordinates into celestial coordinates.

11. (Amended) The automated telescope system according to claim 10, wherein the command unit includes means for receiving telescope position indications from each motor [assembly] portion, the command unit processing the position indications in combination with the geographical location indicia in order to define the telescope's orientation with respect to the celestial coordinate system.

14. (Amended) The automated telescope system according to claim [13] 12, wherein the telescope is provided in a polar configuration.

20. (Amended) A fully automated telescope system with functional intelligence distributed between independent components, the telescope system of the type including a telescope mounted for rotation about two substantially orthogonal axes, the automated telescope system comprising:

an intelligent motor [module] portion, the motor [module] portion including first processor means for commanding a motor to rotate the telescope a desired arcuate amount about a respective axis, and further including position indication means for developing position indication signals corresponding to [determining] the actual arcuate amount of rotation, the first processor means commanding motor movement in operative response to said position indication signals;

a command module, including second processor means for translating a user input into telescope positioning signals suitable for transmission to the intelligent motor [module] portion, the [motor module] first processor means processing said positioning signals into motor motion commands; and

a communication bus coupled between the [command module and the motor module] first and second processor means.

21. (Amended) The fully automated telescope system according to claim 20, further comprising:

first means for determining a horizontal aspect of the telescope independent of the position of a corresponding axis;

second means for determining a vertical aspect of the telescope independent of the position of a corresponding axis; and

wherein the first and second means provide signals corresponding to each determined aspect to the command module.